

**Claims**

- 1. Method for adjusting a volumetric flow-variable positive displacement pump (1) in an internal combustion engine (2), the method comprising the following steps:**

driving the positive displacement pump (1),  
transporting the fluid to the consumption points in the internal combustion engine (2),  
determining at least one characteristic of the internal combustion engine (2),  
transmitting this characteristic as an actual value signal to a controller (6),  
comparing the actual value signal with a predetermined setpoint value,  
generating an adjusting signal from the deviation between the actual value signal and the setpoint value,  
feeding the adjusting signal to a final control element (8),  
changing the volumetric flow of the positive displacement pump (1) by means of the final control element (8) as a function of the adjusting signal,  
repeating the method steps until the actual value signal is the same as the setpoint value.

- 2. Method according to claim 1, characterized in that the suction pressure ( $p_s$ ), the delivery pressure ( $P_L$ ), the speed (n) of the internal combustion engine (2) and/or of the positive displacement**

pump (1), the temperature (T) of the fluid and/or the delivery rate (Q) of the fluid are determined as the characteristic.

3. Method according to claim 1 or 2, characterized in that the setpoint value is provided in the form of setpoint value range.
4. Method according to any of the preceding claims, characterized in that the volumetric flow is changed only when the adjusting signal exceeds a threshold value.
5. Method according to any of the preceding claims, characterized in that the motor control computer already present is used as controller (6).
6. Method according to any of claims 1 to 4, characterized in that, for the formation of the controller (6), the motor control computer is supplemented with the data of the positive displacement pump (1) and the calculation rules for the setpoint value/actual value comparison and the generation of the adjusting signal.
7. Method according to any of the preceding claims, characterized in that the final control element (8) is actuated against a restoring force (restoring spring 9).
8. Method according to any of the preceding claims, characterized in that the delivery volume of the positive displacement pump (1) is reduced on actuation of the final control element (8).

9. Method according to any of the preceding claims, characterized in that the positive displacement pump (1) is adjusted to maximum volumetric flow on failure of the control chain or of an individual component.